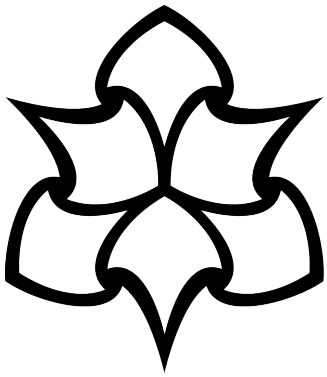

Answering the world: young children's running and rolling as more-than-human multimodal meaning making

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Abstract (150 words):

This paper makes a case for a view of young children's meaning making in which human actants are not separate from, but deeply entwined in, a more-than-human world. In order to interrogate the more-than-human processes through which multimodal meaning making emerges, we focus on meaning making through running and rolling that we have observed in early childhood settings in Finland and the UK. In doing so, we rethink the process of bringing-into-relation (Weheliye, 2014) that underpin multimodal literacy practices. Ingold's (2013) notion of correspondence is offered as a generative way to conceptualize the interplay between human and nonhuman elements as they "make themselves intelligible to each other"

(p.97). We show how posthuman theory offers the possibility for reconceptualising emergence and intentionality, within young children's meaning making.

Keywords:

Literacy, early childhood, running, more-than-human, posthuman, correspondence

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Before young children learn to read and write, they make meaning across multiple modes (Kress, 1997), including with their gesturing arms and moving bodies (Froes and Tosca, 2016; Hackett, 2014; Thiel, 2015). Whilst Kress' (1997) original conceptualization of multimodality in early childhood emphasized young children's intentional design of multimodal signs, recent scholarship has questioned the notion of pre-design (Kuby et al, 2015), intent (Leander and Boldt, 2013) and the assumption that literacy practices are soley human endeavors (Hackett and Somerville, 2017; Kuby, 2017; Kuby et al, 2018; Lenters, 2016). Building on this work, this paper gestures towards an alternative view of early childhood literacies, in which children's multimodal meaning making at a young age is deeply entwined in a more-than-human world.

We re-conceptualize the relationship between young children's entanglement with the world and their multimodal meaning making by drawing on Tim Ingold's (2013) notion of correspondence. Ingold describes a 'dance of animacy' between human and non human

actants, in which each takes a turn to pick up the baton and run with it. Giving the example of a kite being flown, Ingold argues, “flyer and air do not so much interact as correspond” (p. 101). Leaning on Ingold (2013), we argue that multimodal meaning making comes about through and in answer to the world, because “To correspond with the world, in short, is not to describe it, or to represent it, but to answer it.” (p.108). Thus, correspondence is a relation with the world in which “materials think in us as we think through them”, and so the focus is not on how the world is represented but how it is responded to: the quality of the relation is one of correspondence (p. 6-7).

Whilst concurring with the emerging body of scholarship seeking to foreground the role of body, place, affect and atmosphere (Burnett and Merchant, 2018; Ehret, 2019; Thiel and Jones, 2017) over pre-design, intentionality and rationality within literacies, we argue this has major implications for how we might understand and recognize the multimodal meaning making of young children. In particular, human design and intentionality as key features of children’s multimodal meaning making (Kress, 1997), need to be rethought if we acknowledge that modes of meaning making emerge as a result of the sound and movement practices through which human and non human actants correspond (Ingold, 2013) with each other. In this paper, we explore these implications by focusing on young children’s running and rolling, embodied activities that involve semiotic modes such as movement and gesture, yet are also deeply entangled in place and the more-than-human.

Rethinking children’s running and rolling as more-than-human

This paper offers two small data examples with which to consider the problem of young children’s multimodality as more-than-human. In the first example, young children run

around a pinetree as they play in a kindergarten yard. In the second example, children take it in turns to roll down a small grassy hill. We focus on these examples of children's bodily movement in place, as a way of interrogating the conditions through which multimodal meaning making might emerge, firstly because a desire to move around places in different ways (such as running or dropping to the ground and rolling) seemed to be of such central importance to the children in our research. Kress' (1997) approach for his original theories of multimodality was to start with "how children themselves seem to tackle the task of making sense of the world around them" (p.3). In a similar vein, Olsson (2012) advises "listening to and taking seriously children's *production* of knowledge" in order to understand representational logics children are inventing. Inspired by Kress and by Olsson, we attend to the importance of moving around places to young children as a starting point for understanding processes of meaning making with bodies in places. The second reason for focusing on running and rolling is as a fruitful site to interrogate assumptions about mind/ body split in young children's meaning making, as outlined below.

When we come across running or rolling children, we tend to perceive 'child' and 'environment' first and reduce running to intentional movement of the former in relation to the latter. We tend to see children actively exploring their surroundings. This is due to our natural[ised] ontological attitude and training as scientists / academics, in which representations of the world are foregrounded over becoming with the world, and human actants (such as researchers and participants) are assumed to be individualized agents, separate from this world. With regards to literacies, children's bodily explorations of place (such as running) tend to be seen as inspiration for future drawing or storytelling, or as a functional 'release of steam' which will then allow young children to remain stationary and 'focused' during classroom lessons. This separation of literacy practices and bodily

engagement with place can be understood to stem from a Western epistemological / ontological divide, in which human processes of perceiving and representing the world exist separately from the world itself (Watts, 2013). These dominant approaches to early childhood literacies, into which young children are inculcated at increasingly young ages, thus assume that a human child is (or should be) separate from the world, able to stand back, objectively surveil, name and represent it (MacLure, 2016, Hargraves, 2018).

Previously, members of our research collective[1] have argued that children's running is a semiotic mode (Hackett, 2014), a de-individual or a collective way of being (Rautio 2016), and that multimodal communication is more-than-human (Hackett and Somerville, 2017). Rather than viewing running as something children do, we want to consider running as ontologically a priori to 'child' – as giving rise to diverse modes of being a child. In the examples we present, the nonhuman elements of the surroundings seem to suggest, invite and make running and rolling happen. Slanted floors, long corridors, flat hard surfaces, rain and sleet, wind, music, distance between two trees, a fly, a ball. Rather than seeing agency or cause and effect in either the human or nonhuman players in these scenarios, we seek to move beyond these binaries, and instead think how human and nonhuman entities respond to each other, create each other, "wrap around one another" (Ingold, 2013, p.105). Children, we argue, do not initiate, govern or intend running. Rather different kinds of running emerge temporally, spatially and materially – all producing different variations of a 'child'.

Entanglement, difference, touch and intentionality

[1] Naming the World – Early years literacy and sustainability learning, a research project funded by the Australian Research Council (2016-2019) and led by Professor Margaret Somerville (Western Sydney University).

To further nuance and interrogate the notion of correspondence as a relation of responding, as wrapping around one another, we turn to theories that highlight the double-bind of entanglement and difference. This is then discussed further with arguably one of the main interfaces of correspondence: touch, and complemented with theorizing of bodily gestures in general as materialisations of meaning. Finally, we offer a broader notion of intentionality theorized as goal-directedness that stretches beyond a cognitive human individual.

The prevailing new materialist and posthumanist approaches to notions such as agency or literacy emphasize the complexly entangled and blurred existence of self as relational and intra-active, seeking to break the hegemony of isolated subjectivity (e.g., Kuby 2017). Much of this scholarship can be taken to celebrate continuity, similarity and relation – sameness, or the "surpassing of the bounded self" (Weinstone, 2004, p.93). However, with closer inspection, pointed out by Stephen Dougherty (2011) for one, the underlying structure is nevertheless based on difference, on the idea or at least the legacy of deconstruction in particular. That is, in spite of the rhetoric of everything blurring and bleeding, there is always separation and distance, there is always the self and the other – however porous, leaky and intermingling these entities are.

Understanding difference within notions of entanglement and blurring leads us to the materially and bodily relational notion of touch (e.g., Dougherty, 2011). Dougherty discusses three seminal works in cultural theory and the rhetorics of touch: Ann Weinstone's (2004) *Avatar Bodies*, Erin Manning's (2007) *Politics of Touch*, and Jean-Luc Nancy's (2000) *Being Singular Plural*. All three state a stance towards deconstruction as the basis of thinking about communication with alterity or the world. We will review this mapping briefly as it lays the ground for our elaboration of multimodal meaning making through running and rolling. Of

the three Ann Weinstone (2004) argues that most of contemporary posthumanism is undermined by its affiliation with deconstruction(ism). That deconstruction retains a fundamental space between individuals and therefore the idea of the humanist liberal subject. Erin Manning (2007), however, warns us against a "fusional fantasy" and points out that communication requires separation and a respect for alterity (the other). In writing about touch, Manning says that it creates the interval between me and you. Jaques Derrida (2005) calls it “the unbridgeable abyss” (191), and warns against the idea of immediate access to the other, leading at worst to a blind re-appropriation of the alterity of the other (Dougherty, 2011, 82). Jean-Luc Nancy (2000) in turn suggests that what we share in our sociality, or communication, are not our individual subjectivities but the very structure of the social which allows us to share:

> ”[C]ommunication is not an instrument of Being: communication *is* Being, and Being *is*, as a consequence, nothing but the incorporeal by which bodies express themselves to one another”
> (Nancy, 2000, p.93).

Dougherty (2011, 90) makes a detour to gesture research in psycholinguistics to illustrate Nancy’s claims. According to McNeill (2005) we think with our bodies as much as with the soft matter in our heads, making gestures as the bodily materialisations of meaning. This means that physicality of language extends beyond the vocal chords, tongue and mouth (MacLure, 2013) to encompass the whole body. Gestures, for instance, do not replace speech. Contrary to popular belief, gestures do not commonly increase when words begin to fail; gestures and speech fluency more often go hand in hand so that when words increase, so do gestures and vice versa. The level of motor involvement seems to parallel fluency and

fullness of words and speech (McNeill 2005, 26-27). In an evolutionary view "[g]esture is not a behavioural fossil but an indispensable part of our current ongoing system of language" (McNeill, 2005, p.20).

There are roughly two, albeit overlapping ways to approach this kind of relationality of language and body: to focus on the unfolding relation per se, or to focus on the processes which enable and/or sustain the relation in the first place. Alexander Weheliye (2014, 12-13) advocates for the latter as more productive for critical and political inquiry:

> "Relation is not a waste product of established components; rather, it epitomizes the constitutive potentiality of a totality that is structured in dominance and composed of the *particular processes of bringing-into-relation* […]"
> (Weheliye, 2014, p.12-13, our emphasis).

Thinking about running non-anthropocentrically involves attending to processes of bringing-into-relation. This is to say, we think of running as a response, as children answering the world (Ingold, 2013) rather than as movement initiated or invented by child bodies. In this way, the notion of intentionality moves away from a problematic focus on human cognition, and instead adopts a more expansive definition, in which intentionality is a goal-directedness, or purposefulness, yet this purpose does not have to be defined in advance (Favareau and Gare, 2017). This is the position taken up by the field of biosemiotics, in which semiotic signs must have an intentionality, as sense of "in order to……", yet the goal or purpose does not have to be specified in advance, because "intentionality is first and foremost a naturally occurring biological phenomenon rather than the product of human mental activity fundamentally." (Favareau and Gare, 2017, p.419). Critiquing the narrow human and

cognitive context within which intentionality is sometimes understood, Favareau and Gare (2017) point out

> ”We are often in states in which we open ourselves to impressions without searching for anything in particular, but even then a deeper biological ‘in order to’ is operative at the basic biological level of our body. Bodies are inherently semiotic and intentional entities.” (p.418)

Turning our attention again now to young children’s multimodal meaning making, even if the child has a form, an intention, a meaning in mind, as they orientate their gesturing, moving sounding bodies within the world, applying Ingold “it is not this form that creates the work. It is the engagement…” (2013, p.22). Children do not so much *interact* with slanted floors and grassy hills as *correspond* with them. This is to say that children (or humans in general) do not experience themselves as neatly outlined units but as moving and continually responding; bodies in correspondence with the world, bodies as something to think *from* (Ingold, 2013, p.94; Sheets-Johnstone 1998, p.359). The relation between the grassy slope and the rolling human body is an experience of alterity. The child might intend to roll down, yet it is not her rolling body alone, but the difference that sets the body in motion – that produces what the body can, as it were, think, and thus what meanings can be made.

Re-conceptualizing young children’s multimodal meaning making as more-than-human

Kress’ (1997) influential work drew attention to the meaning making of young children through multimodal signs, arguing that “in learning to read and write, children come as

thoroughly experienced makers of meaning" (p.8). In identifying meaning making as multimodal, and these processes as taking place in complex and meaningful ways long before children can read or write, Kress' theory of multimodal literacies opened up the possibilities for thinking about young children's literacy practices beyond their observation of and participation in the literacy practices of adults. Thus, scholars of early childhood literacies attend to modes children use before they are reading and writing, such as gestures, mark making, movement and arrangement of toys during play, seeking an understanding of emerging literacies.

Kress (1997) describes young children navigating a complex, fast moving, digital world, arguing that human motivation / design / intent is required in order for children to navigate, thrive and understand. Describing young children's interactions with pillows made into cars, or a cardboard box used as a pirate ship, Kress argues that these activities should be considered communication rather than 'expression' (p.9) or 'play' (p.13), for the explicit reason that, as communication, they could be valued more highly in school classrooms and taken more seriously as objects of research. Central to Kress' argument for these interactions with the world as communication (rather than expression) is the notion of the child as intentional and masterful designer of pre-conceived and carefully designed signs. This notion works to separate human from more-than-human and position agency and intentionality solely within the human. In other words, Kress elevates multimodal meaning making of young children before they can read or write, to the level of written or spoken language, understood in a Western ontological context as the special preserve of the human species and evidence of a higher level of thought.

Nevertheless, semiotics, that is, systems of sign making, advocated by Kress as an alternative to linguistics in this field of study (1997, p.6), is well established as thoroughly more-than-human, in that many nonhuman beings make and interpret semiotic signs (Favareau and Gare, 2017; Kohn, 2013). This offers an opening for rethinking process of young children's meaning making, particularly what the emergence of meanings might look like and what intentionality might involve. From a semiotic perspective, signs are broadly objects, ideas or events that "stand for something else" (Colapietro, 1993, p. 179, in Leung, 2018), a representations that "stands for another, so that an experience of the former [the representamen] affords us the knowledge of another [the object]" (Peirce, 1986b, p. 65, in Leung, 2018, p.106). The possibility of an object or event representing something else does not rely on human design, or even on human interpretation, a case that Kohn (2013) advances in his analysis of semiotic communication in Amazon forests, in which semiotic signs are both created and interpreted by all living beings.

The work discussed above on entanglement, similarity, difference and intentionality with regard to the emergence of semiotic signs, is a fruitful direction for the reconceptualization of young children's multimodal meaning making as more-than-human. This builds on the recent critique of theories that assume literacies to be cognitive, pre-designed or intentional (Ehret, 2019, Kuby, 2017, Leander and Boldt, 2013). Extant scholarship bridging posthumanism with literacy studies has begun to unpick the issue of human intentionality in literacy practices (Hackett and Somerville, 2017; Kuby, 2017; Wargo, 2018). Most notably, Kuby et al (2015) propose the Deleuzian notion of desiring rather than design as a way of thinking about what happens between children and craft materials in a writing workshop. Similarly, others have drawn on Deleuzian scholarship to rethink young children's meaning making. MacRae (2011) described young children's making with craft materials as taking off along

unpredictable ‘lines of flight’ than transcend human design and intent. Thiel (2015) offers the notion of embodied literacies, in which children’s story telling through their play and movement in place involves intense surges of emotion to which children’s moving bodies respond. Burnett and Merchant (2018) have suggested rethinking literacy events with ipads in an early years classroom using the Deleuzian notion of event in order to consider the fluid and relational nature of literacy events and their multiple possibilities. This work extends notions of multimodal meaning making in early childhood to emphasize the moment-by-moment unfolding nature of it (Kuby et al, 2015), which come about as a result of (human and nonhuman) bodies moving together (Hackett and Somerville, 2017). All of this at least begins to echo the focus that Weheliye (2014, 12-13) proposes: rather than simply describing the unfolding relations, it is the processes which enable or sustain these relations that are of significance.

In the next section, we elucidate these arguments further by offering snippets from our fieldwork in Finland and England. Conducted simultaneously, our contextually separate fieldwork examples have a conceptual frame: both belong to a wider international project focusing on young children’s literacy and sustainability development (see footnote 1). As the purpose of this paper is theoretical rather than empirical, we offer just one small story from each of our fieldsites, for the purpose of interrogating further what it might mean for children to correspond (Ingold, 2013) with the world as more-than-human multimodal meaning makers.

Pinetree-running in Finland

A series of running events spin around one big old pinetree. The majestic, stoic, life-giving force of the tree left standing in the middle of a kindergarten yard materialises as lively flutter in children, birds, bugs and butterflies – and no doubt in a multitude of smaller organisms the tree hosts. The tree is left standing and stands out because of the children, and the children run because of the tree and because of the other things it animates – all conditioning each other's existences through relational dances or correspondence (Pickering, 2005; Ingold, 2013).

These choreographies of various dances were traced at the outdoor playtimes of one kindergarten in Finland over three spring months in 2016. The children carried a chest-mounted action camera, one at a time, changing at will. The researcher was present, mostly talking to and playing with children, sometimes with the ones carrying the camera, sometimes with others. Later on in viewing the material produced by the children and the cameras the researcher was running by proxy. For hours on end.

The pinetree joins forces with the children and begins to materialise in their movements. When we approach running as a form of correspondence – a relation between a child and her surroundings, unfolding in a tumultuous manner – it becomes hard to see moving child individuals or to focus on their intentions. Rather the yard seems to be alive with the forces of all but the humans who think of it as theirs. The earthworms peeking from the ground after a rainfall make children run in zig-zag trying to get a glimpse, and if they do – to quickly kneel down and try to touch them, if only slightly brushing before they disappear again. The shade of the pinetree makes children gather under the tree on a sunny day. The trunk of the tree makes children go round it, the pieces of bark and broken off sticks the tree provides makes children jump and draw. If the drawing sticks – called so by the children – have a pointy

sharp end they can be used for drawing fine things and running race finish lines. If blunt, they will be used for wiping the sand clean for new drawings. Yet, the sticks are not picked up as pointy or blunt, they differentiate as such only when they touch the sand, squeezed in a child's hand.

This is where understanding touch in relation to correspondence is helpful. Touch is both unique and shared – it requires both/all surfaces yet belongs to nobody alone. Tuure Tammi and Riikka Hohti (*forthcoming*) write about touch as inviting "passionate immersion in the impure and non-innocent ongoingness of worlding". A part of the non-innocence of this immersion is not-knowing what will follow, and recognising that it is always more than a human affair: we do not fully intend and control touch or being touched. The sticks on the ground become drawing sticks, certain kinds of drawing sticks in the relational emergence of a drawing event: a shade of a tree, moist sand, stick, children's bodies and the touches and movement involved. And so, rather than intentionally interacting with the worms, the tree, or the sticks, the children are responding to them because of their alterity. They are thinking *from* their bodies and with the objects and beings that animate them. This process, set in motion by difference, is that of corresponding (Ingold, 2013).

The intimate practices the children are engaged in when responding to the pinetree, the bugs, the wind and the sand – when running because the world makes them – both make them and are not their own. Children's correspondence with the tree, make children into certain kinds of beings. The correspondence is thus generative rather than representative. These intra actions produce particular kinds of embodied multimodal meaning making, in the sense that they produce a specific way of referring to pinetree, yard and children, an understanding that is shared between the human and more-than-human participants involved in the

correspondence. The correspondence between the children and the tree brings these things into relation in a particular way – one that could not have been known beforehand. The intention to run around a tree was a result of both the tree's invitation: its "runaroundability" and the child's decision to do so. Yet what ended up being produced could not have been a pre-intended goal.

These literacies do not become the children's possession, a skill, an end product somehow lodged within them. Rather the literacies are pathways and channels – for the children and for others tuned to observing – for the voices and stories of the world. The pinetree literacies translates meaning into human-accessible formats through the responses of skilled human individuals. In this case children.

The processes of bringing-into-relation (Weheliye 2014, p.12) children and the wealth of more-than-human others are complex and diverse, and by no means innocent or positive by default. The assemblages described above are filled with preferred articulations, or "historically sedimented power imbalances and ideological interests" (ibid.: p.49). That the tree left standing is a planted pine tree, that children of certain ages are collected to attend preschool, that the earthworms are welcomed but other animals kept away, the yard fenced, that all of the children are white, and the girls wear pink muckboots and overalls. That the very notion of 'literacy' is recognised to belong indoors by the educators, or if outside, at least to materialise in drawing on the ground with sticks. It is recognized as an exclusively human process of intentional representation. The modus operandi of the processes by which the outdoor assemblage is brought-into-relation exhibits a heavy legacy of rationality, functionality and governance.

Grass-hill-rolling in England

A practice of rolling down a small muddy hill in a day care centre for two year olds evolved over a series of summer months. Wet weather makes the hill muddy, and historically this outside space has therefore been off-limits to the children. That summer however, the children participated in a series of outdoor sessions with a forest schools practitioner, who worked with the day care staff to develop their confidence in using the outdoor space with the children. The children's developing exploration of and use of the outdoor space was recorded in fieldnotes and short videos, taken on a handheld video recorder by the researcher, who attended the sessions once a week, playing with and hanging out with the children during a 5 month period.

The children run up the hill, slowly and with difficulty as their leg muscles encounter the steep angle of the hill. A 2 year old girl ascends the hill. Once at the top, she pauses, a moment of stillness, before dropping to the ground and beginning to roll down. As she rolls, she goes faster and faster, losing control of her body and the process. She lies still, as if unconscious, for a few mins at the bottom of the hill, before getting up and repeating. Her coat is getting wetter as she rolls over and over again.

Following Ingold (2013), the children, grass, raindrops and the angle of the mounded up earth beneath the grass turf in this episode, are in correspondence with each other. Understanding correspondence with the world as "a relay" in which different players "take up the baton and run with it", support a view of intentionality as open-ended, in which process occur "in order to..." without the end goal needing to be defined (Favareau and Gare, 2017). Rather than rationality and design, children's correspondence with grass, soil mounds and rain drops can

be understood as “a process of growth” (Ingold, 2013, p.97), emerging not as a result of pre-designed human intentionality, but through a process of grass, soil, raindrops and child “trying to make themselves intelligible to each other”.

Thus, within this process children and hill “take up the baton”, as part of a more-than-human process of growth and ongoingness. Slowly, over time, shared meanings emerge. Climbing the hill, dropping, rolling down, tells a particular kind of story, a particular kind of bringing-into-relation of grass mounds, soil, children and dew drops. In particular, the practice of hill rolling gained its meaning from its repetition and increasing popularity with the children in the day care (but not the adults, none of whom ever rolled down the hill). In this way, hill rolling emerged as an embodied multimodal sign that conveyed personal connection between the children, a shared sense of place, and an insider knowledge about this specific way of being with the hill. Through repetition, meaning emerges; children-hill-grass-dew carry a particular kind of message that can be shared with others and referred to by those participating in the correspondence.

This process of growth involves an opening up to the world, which begins with an acknowledgement of difference and alterity. To open up, to reach out and touch, is to take a risk, yet at the same time, is essential to the ongoingess of living in the world (Ingold, 2013). As in respiration and metabolism, bodies and things are sustained by taking things in and discarding them. “Yet.....the same processes that keep it alive also render it forever vulnerable to dissolution” (Ingold, 2013, p.94). Working closely with the video footage of the children rolling down the hill, there are distinct parts to this correspondence. Firstly, the children run up the hill, leg muscles struggling against the unfamiliar incline. At the top of the hill, there is a pause, a moment of non movement, pregnant with possibility, expectation,

risk. Then knees bend and bodies drop, the child gives themselves up to the hill, bodies pressed without control against grassy surface, the body rolls out of control to the bottom of the hill, legs and arms flung over each other. This fine grained reading of the process of running up and rolling down the hill speaks of leakiness, of opening to the world, taking in and letting out, a 'relay' (Ingold, 2013) between hill, children, grass, soil, dew drops.

Politicizing more-than-human literacies

As the rocks, puddles, wooden floors and slanted grass hills materialize in running children, they also materialize or produce children in material-socio-geopolitical contexts, inseparable from material-discursive constructions of class, gender and race. Thiel and Jones (2017) describe how objects can produce literacies that control and colonize children. Therefore, we do not want to romanticize children's correspondence with the world, to imply that their running, rolling and climbing has an innate innocence or operates in a socio-cultural-free vacuum. Returning to Weheliye's (2014) notion of bringing-into-relation, a process that is shaped by ideology and power, we understand running and rolling as shaping and creating place and children in particular, situateded ways that are always political.

The ideal child is produced through running when and where it is safe, appropriate and when the running signals physical exercise. Sports fields, playgrounds and paths in the woods produce ideal, happy, healthy children. Parking lots, shopping malls and a variety of other public or semi-public areas produce ill-behaving, unruly, defiant children. Additionally, as scholars have demonstrated, children from working class families (Gillies, 2007), children of colour (Dyson, 2015) and children from non Western societies (Avineri et al, 2015) are more likely to be seen as trouble makers, a threat or a problem when they experiment or push the

boundaries with regards to how they answer the world. The designation of 'bright' child is frequently reserved for children who are white, Western and middle class. When rolling down the hill at the day care centre, children initiated rolling gradually, hesitantly, feeling their way into whether this behavior was permitted, alongside the outdoor activities organized for them by the teachers, such as painting with mud and collecting objects in sensory boxes. For children from this particular community (a white working class post-industrialized community), an additional complication were the culturally specific meanings of cleanliness and respectability (Skeggs, 1997); initially many of the children became distressed when they noticed the hill rolling had muddied their hands and coats, and had to be reassured. This is just one example of how complex and unpredictable layers of affect, history, meaning and materiality come into play as places and children are materialized through such correspondence.

Rethinking emergence within young children's literacies

The multimodality of young children's literacy practices (Kress, 1997) was a crucial step in recognizing young children's meaning making as something that extends beyond young children noticing and participating in the 'already here' literacy practices of adults (Hackett, in preparation). As described above, we are advocating for a view of young children's multimodal meaning making that resists a separation between human and nonhuman, and the human design or intentionality this would imply, and instead considers what comes into play as human and nonhuman actants "wrap around one another" (Ingold, 2013, p.105). As an example of this, running and rolling as more-than-human multimodal meaning making does not develop and accumulate in a linear way, as sets of independent skills. Rather it is an ongoing system to participate in, and depending on other participants and the context, this

whole system changes and fluctuates – or is emergent. Emergence as a general phenomenon is about relational growth. It is when a system does not depend on the individual parts alone (on individual intentions, plans, or goals) but on their relationships to one another (Dalke et.al., 2007, 113). Emergent systems not only allow but require a degree of randomness and autonomy, not control, to function. And so, any kind of distraction from an intended or planned course of events can be thought of as distractions *towards something* not planned (Rautio, 2018).

In this way, an important aspect of more-than-human multimodal meaning making is taking a risk, opening up and letting go – of tongues, vocal chords, arms or bodies perhaps, in order to play one's part in bringing the world into relation with itself. In rolling down, climbing up, and crawling across, the hill and the children are engaged together in processes of growth and movement, processes that both "keep....alive" and "render...vulnerable to dissolution" (Ingold, 2013, p.94). Children's bodies act to convert the kinetic qualities of these tree and hill processes of growth, movement and dissolution into new registers of material flux. At the same time, children's bodies and the semiotics meanings they instantiate are produced through the same processes.

Over the course of three months of field visits to a kindergarten yard in Finland, the giant pinetree standing in the middle of the outside play area was never heard mentioned or named. This did not indicate an oversight, a deficit, lack of attention or skill. It did not mean that the tree was insignificant. On the contrary, the tree was constantly corresponded with as a material reality, but without explicit representation, a linguistic tag. As Maclure (2013) points out, linguistic systems can sometimes render "material realities inaccessible behind the linguistic or discourse systems that purportedly construct of 'represent' them" (p.659).

MacLure (2016) draws on Deleuze and Guattari to describe a 'pedagogy of order words' in which the purpose of language is to fix meaning of the material world, and create a hierarchy in which the non human world is knowable and subservient to the human. The naming or the order-wording of the pine as a "pine" or even, say, "the big tree" in our example might not have changed the ways of corresponding with it (of course, we cannot know), but naming was evidently not needed. In the video, the tree is almost always present. Not as an individual agential being or element, not as a backdrop either, rather as if smoothly blending in with children. Our point here is that not only is children's spoken communication closely related to their meaning making across other modes (Kress, 1997), but that sometimes spoken words are part of what is brought into relation (Weheliye, 2014) during the process of correspondence. When spoken words do not seem to be required by anyone involved in the correspondence, we need to consider the nature of emergence as fluctuating, random and autonomous, and MacLure's (2016) point about the propensity of words to fix meanings into place.

Discussion

Just as young children's multimodal meaning making involves the more-than-human, we have additionally argued that more-than-human beings are also participators in and practice-ers of multimodal literacies. The animating capacity of gravel and puddles materialise when rock and water join forces with human children – these joining forces materialise in running. When observing running children, we find ourselves observing the movements, intentions and life-forces of gravel, sand, water, sticky muddy grass slopes and polished wooden boards on museum floors. In running ourselves, the animating forces of these materials are directly felt and the ongoing running is a mode of correspondence. Our bodies participate and give a

human-scale voice to materials otherwise seemingly latent and inanimate. Setting running free from the intentions of human bodies excavates layers of material forces and effectively disorients us. In running, the slower moving materials join forces with human children. Deleuze and Guattari write that matter-energy, or movement exists, in all things. As Springgay and Truman (2016) point out "Stones are only inert when considered anthropocentrically.....This is a matter of scale." (p.58). The movement of the gravel – the chipping and crumbling apart from bedrock as old as the Earth – is almost nonexistent from a human perspective. The slowly circulating water moves faster than gravel to complete the cycle of rain, evaporation, condensation, and again rain. Slow enough for puddles to splash when run into, but fast enough for humans to observe. These embodied multimodal signs then, are not purely the result of humans acting in intentional and pre-intended ways on the more-than-human world, but rather about giving a human-scale voice to more-than-human practices of growth, change, ongoing life and dissolution. However, this human-scale voice does not precede or initiate the correspondence, because subjects do not pre-exist the assemblages of which they are part (MacLure, 2016).

In making the argument for rolling and running as more-than-human multimodal meaning making, we move beyond established points about the importance of using and combining a wide range of modes for children's communicative competence (Kress, 1997), to rethink the process of bringing-into-relation that underpin multimodal literacy practices, and who or what might drive and contribute to these processes. Ingold (2013) describes corresponding with the world as "a lifetime of intimate gestural and sensory engagement" (p. 29). What does this notion of slowly growing experience in corresponding with the world, mean for young children as literacy practice-ers? Rather than an increasing mastery of the world through language, as a practice of fixing and holding in place, an increasingly skilled craft in

more-than-human literacies would require an ever deeper wrapping together of human and nonhuman processes of growth and dissolution, and ever expanding notion of what it might mean to make oneself present in the world. Rather than merely supporting or enhancing children's ability to describe or order their worlds, multimodal meaning making understood in this way gestures towards a different conceptualization of literacies, which is about being alongside rather than mastery over more-than-human world (Powell and Somerville, 2018). Thus, these ideas might offer a route towards more sustainable, de-anthropocised and entangled conceptualization of early childhood literacies.

Conclusion

Young children's multimodal meaning making relies on human and non human bodies moving and sounding in the world (Hackett and Somerville, 2017). This movement is the result of entanglement and difference, driven by an open-ended kind of intention rather than human design. Ingold's (2013) notion of correspondence is a generative way to conceptualize the interplay between human and nonhuman elements as they "make themselves intelligible to each other" (p.97). In other words, movement or sound emitting from, with and in relation to human bodies is dependent on the alterity of the more-than-human world for its emergence, shaping, meaning, materiality, actualisation. The double bind of being a singular "me" yet gaining this experience of "me" through an engaged communication with the world, is evident when we think of touch. In touching, two entities both engage in communication and are created relationally by that communication. Touch is directed towards the yet-to-come, and its responsive nature entails that the futures present in touch are never fully settled (Tammi & Hohti, *forthcoming*; Manning, 2007). From this entanglement with difference, shared meanings across different embodied modes emerge, not as the result of human

predesign, but as a result of more-than-human intentionality – an intentionality that drives forward with a purposefulness that is not directed towards a specified goal.

Thus, from a posthuman perspective, bodies and texts do not pre-exist their encounters: that is, ideas-to-be-signified do not pre-exist their instantiation in multimodal signs, nor do human bodies pre-exist their responses to literacy texts and bodies. Aligning with the posthuman ontology, as applied in this paper, embodied texts arises because of, and out of, communication with alterity. Such an ontology "conceptualizes literacy as unbounded, rhizomatic, embodied, social (human and nonhuman), and intra-active." (Kuby, 2017. p.16).

In addition, by focusing on the processes that bring about more-than-human multimodal meaning making, we gain access to the critical conditions that shape children's seemingly free and autonomous multimodal literacy practices: what is the kind of human-ing available to children *in the positions they hold in our societies? And in the material conditions of their lives?* Where and when can children answer the world through their moving bodies? When and which material forces are allowed or denied their potential to materialise into running children? Alexander Weheliye (2014, p.12-13) directs us to look at the particular processes of "bringing-into-relation" as these compose and constitute the 'child' among other components, processes of composition and constitution that are always political and ideological. In attuning to young children's running and rolling, we foreground a focus on the processes that enable and/or sustain the activity – the language-body relation – in the first place, as productive for critical and political inquiry. In paying attention to these more-than-human practices, viewed through a bodily human expression, that we observe more-than-human multimodal literacies in the making.

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